Learning with/ from others: Teachers' perceptions of peer collaboration and group work in the OBE classroom.

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Abstract

Post 1994 the South African education system has focused on creating education for all under a single core syllabus. It also stressed the need for a shift from the traditional teacher-centred approach to a learner-centred approach. As a result, the shift was made from an aims-and-objectives education to Outcomes Based Education (OBE). OBE has placed a different set of demands on teachers and the way in which they assess. Specifically teachers are required to use peer collaboration to bring about learning and simultaneously assess that learning has transpired. However, many teachers are left feeling uncertain about the efficacy of OBE. This report reviews the relevant literature as well as theories needed to understand the process learning. The objective of this research report is to establish teacher's current perceptions are of OBE. More so, the research aimed to ascertain how useful peer collaboration is in facilitating learning. The results from this study show that teachers are uncertain about the efficacy of OBE. Although a significant number of teachers strongly agree with the underlying principles of OBE they feel that implementation as intended by policy makers is idealistic. Furthermore, they are conflicted about the notion that peer collaboration can sufficiently facilitate learning. Lastly, the findings of this study suggest that in implementing peer collaboration successfully, tenets from social psychology such as group dynamics need to be considered.

Keywords

Outcomes Based Education
Outcomes
Group work
Peer collaboration
Piaget
Vygotsky
Learning

Declaration

I hereby declare that this research report is my own unaided work. It has been submitted exclusively to the University of the Witwatersrand in partial fulfilment of the requirement of the degree of Master of Education (Educational Psychology)

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Table of contents

Introduction

Considerable changes have transpired in the South African education system post 1994. The most significant one is that education is no longer an unequal system but that it provides education for all under a single core national curriculum (R-NCS, undated). The focus of the new education system it that of developing individuals who will be "lifelong learner[s] who [are] confident and independent, literate, numerate and multi skilled, compassionate with respect for the environment and have the ability to participate in society as a critical and active citizen" (R-NCS, undated, p.4).

According to the Department of Education (DoE) Outcomes Based Education (OBE) provides a framework which will allow for such learners to develop. Furthermore, OBE considers the process of learning to be just as important as the content. In contrast to the previous education system, the emphasis in the new system is on achieving outcomes. The assumption is that once learners are sufficiently able to accomplish the skills as stipulated by the outcomes in the R-NCS, learning has taken place. "The quality of an educational system can be judged from at least three perspectives: inputs into the system, what happens within the system and the output from the system" (Killen, undated, p.1).

According to previous research completed by Jansen (1998), Malan (2000) and Berlach (2004) it is not the criteria of OBE that are problematic but its implementation. This study focuses on the teachers' perceptions of OBE with particular reference to the use of peer collaboration in facilitating successful learning.

This research report begins by reviewing relevant literature, which is related to OBE. Chapter 1 also looks at the concept of peer collaboration and how it is used to facilitate learning. The theoretical framework in chapter 2 begins by introducing traditional conceptions of learning. In this study chapter 4 focuses on Piaget and Vygotsky's theories of development and how these theories have influenced contemporary conceptions of learning. Chapter 2 also looks at social psychologists understanding of

the role of others in learning. Chapter 3 provides a discussion of the research method adopted in this study. The data obtained is then presented and the research report concludes with a discussion of the findings.

Chapter 1 Literature review

Introduction

There have been several major changes in the South African education system over the last decade. Of particular importance is the move from a teacher centred approach of instruction to a learner centred approach. In addition, there was a move away from content to a system where learners developed knowledge, skills and values. Furthermore, learning within this new system was supposed to be interactive and based on a shared learning experience through the use of group work[1] and peer collaboration.

The aim of collaborative learning is to help those in the class attain knowledge from the other learners, develop skills that are important for functioning in various other situations and to encourage all within the group to work towards a common gaol. Collaborative learning is therefore seen as a way to get the learners to actively participate in their own learning process. While collaboration can help create well-rounded learners, this method is not yet sufficiently established.

Bearing in mind that "the development of a national curriculum is a major challenge for any nation… and [the] assumptions of what constitutes a 'good education' at its deepest level" (Asmal, K, undated, p.1) is often subjective, the methods used require careful exploration. This chapter will therefore firstly broadly outline the principles of OBE. Then it will examine the ways OBE is implemented in the South African context. Lastly, it will look at peer collaboration/ collaborative learning because this method is widely used in the OBE classroom.

[1] It is accepted that group work is predicated on collaboration between peers. However, for the purpose of this report, the concepts "group work", "peer collaboration", "co-operative learning" and "paired learning" will not be used in the strict semantic sense and the researcher will use these terms interchangeable.

Basic Tenets of Outcomes Based Education (OBE)

Killen (undated) states that OBE can be thought of as a theory or philosophy of education as it is seen to embody and express a specific set of beliefs and assumptions about learning, teaching and the systematic structures wherein these activities take place. Spady (1994, in Killen, undated) further says that OBE should be seen as a means which allows for all students to be successful at the end of his/ her learning experience. Thus, Spady (1994) suggests that educational instruction should start with a "clear picture of what is important for students to be able to do, then organise the curriculum, instruction and assessment to make sure that learning ultimately happens" (Spady 1994 in Killen undated). As Killen indicates, the difficulty in Spady's proposal is the assumption that a teacher is able to determine how the learner should reach the desired outcome and what a learner will assimilate in the process. In the South African context, the notion of OBE is embodied in the National Department of Education Policy Document (1997) and it is believed the adoption if OBE will achieve learning for all. Specifically this policy document recommends that teachers first decide on the outcomes, then the content and learning programs before learning takes place. Subsequent to the revision of the original policy as contained in the Revised Nation Curriculum Statement (R-NCS) reduced the number of outcomes while specifying more clearly the critical outcomes, specific outcomes, assessment criteria, and performance indicators for every level of schooling.

The OBE policy and concomitant classroom applications suggest that learners are not assessed on what they should be able to do at that age or in a specific grade, but rather against their own ability. The National Department of Education Policy (1997) further suggests that if a learner is not meeting the expected outcomes or assessment criteria that the teacher should design more programs, which will enable the learner to meet the assessment criteria. Therefore, OBE is based on assessing what the learner can do as

well as facilitating learning in an environment where cognitive skills go much deeper than simply choosing the correct answer (Spady, 1995). The intention of OBE is to encourage higher levels of thinking (creativity, analytical skills and organisational skills) which is thought to prepare the learner for the 'real world' (Spady, 1994).

Despite the good intentions of Outcomes Based Education (OBE), the difficulty in implementing OBE may be attributed to the founding principles upon which the South African version of OBE is based. According to Malan (2000), OBE mirrors Competency-Based Education (CBE) which was introduced into the American education system at the end of the 1960's. CBE was developed in response to concerns that learners were not being taught the skills that they required for life after school.

Malan (2000) also states, that OBE within the South African context not only mirrors CBE but it also has elements of mastery learning. Mastery learning was developed as an intervention program for learners with mild disabilities and who were seen as not being able to succeed in traditional educational settings (Malan, 2000).

Berlach (2004) believes that it is not the concept or idea of OBE, which prevents OBE from succeeding but that the details, and implementation, which makes it unsuccessful. In addition, Berlach (2004) argues that OBE is overly obsessed with accountability, as all that transpires within the classroom requires proof and a plethora of evidence. Furthermore

> It is plagued with vagaries. Nearly all classes of activities with almost minimal effort can be subsumed under one or more outcome statements. Outcomes are usually so vague that almost anything the child does can be manipulated to suit one or other outcome. (Berlach, 2004, p.3)

Jansen (1998) echo Berlach's (2004) conclusion on the unpredictability of attaining outcomes. Jansen (1998) states that not only is the language of OBE often too complex, confusing and often contradictory but that individual understanding of terminology leaves much room for incorrect interpretation.

OBE in the South African context

Considerable shifts have taken place in South Africa over the last decade and these changes have had a phenomenal impact on the education system. Koekemoer and Olivier (2002) show that these changes were as a result of the previous education system being viewed as offensive and the content seen as outdated. Thus, the South African education system has been subjected to fundamental changes in the curriculum as well as in the means of instruction. According to the Revised National Curriculum Statement (R-NCS) (DoE 2002), the curriculum is designed to represent "priorities and assumptions of what constitutes a 'good-education' at the deepest level". The redesign of the curriculum was based on the premise that a "shift was needed from the traditional aims-and-objectives approach to outcomes-based education."(R-NCS, 2001, p 4). Although the new approach was welcomed, not all educators accepted the change. It seems that the resistance to embrace the new way of teaching is the result of the continuous difficulties in implementing the new curriculum (Koekemoer & Olivier, 2002).

The new curriculum aims to develop the full potential of every learner. Consequently, the new system of education endeavours to grow learner potential by adopting an inclusive approach that stipulates that all learners, despite capability levels, should reach a set minimum standard of competence (R-NCS, 2001). One of the underlying debates pertaining to the curriculum is that of how learning (the construction of knowledge) is facilitated and the role that the educator plays (Chisholm, 2005). Traditionally the educator's teaching methods tended to be behaviouristic and authoritarian. However, the new approach to teaching is based on a social constructivist model (Messerschmit, 2003). The principles of the social constructivist model put forward the view that learning occurs as a result of continual interaction between the learners and their context. Although the South African education policy attempts to use the principles of social constructivism, it is these very principles that result in profound tension,

contradictions and paradoxes (Chisholm, 2005). Thus while current education policies are well intentioned it seems that it is the entrenched practices (methods of teaching and assessing) that seem to be hampering the educational authorities' efforts to transform education in South Africa (Vandeyar & Killen, 2007).

The fundamental aim of OBE is for all learners to succeed. More importantly, the success that is envisaged is that of the learner being prepared for life rather than "for more schooling" (Spady 1994 in Engelbrecht, Green *et al*, 2003, p. 75) as well as being self-directed and having the ability to solve problems. Spady's (1994) view implies that OBE does not only affect the learners but the educators as well. Brown (2003 in Vandeyar and Killen, 2007) argues that "pedagogical acts 'are affected by the conceptions teachers have about the act of teaching, the process and purpose of assessment and the nature of learning" (p. 101). Indicating that while policy stipulates required methods of instruction and assessment, educators may dismiss these based on their personal beliefs. Additionally, the new role of the educator is to change from being an instructor who transmits knowledge to that of a facilitator. The role of the facilitator is to guide the learner through the learning experience, challenge the learner to think differently and ensure that the learner has adequately grasped the important concepts. Thus, the responsibility for learning no longer lies with the educator but learners assume responsibility for their own understanding, which encourages them to construct their own knowledge and become independent thinkers (Engelbrecht, Green *et al*, 2003). The basic motivating principle of OBE in this regard is that all learners have the opportunity to be successful (Eloff & Ebersohn, 2004).

A core principle of OBE is peer collaboration (DoE, 2002b).Within the South African context; it is left to the educators to decide on how to implement such collaboration. In order for peer collaboration to be effective, the intricacies of collaboration need to be defined. Friend and Cook (2000) explain it in the following manner as a direct interaction between individuals a minimum being two who are coequal parties and voluntarily engage in a shared decision making process in order to reach a common goal. In analysing the above definition, the following concepts are of importance, that

there is equal and active participation expected from each member of the group, as well as working together to achieve a common goal.

Peer collaboration within the context of the classroom.

The concept of peer collaboration or group work seems to place great importance on the learner and his or her abilities. Furthermore, OBE emphasises the need to bring to the surface the local, hidden and silenced knowledge and everyday realities of the learners. Through using the learners' experience, meaningful understanding can be encouraged (Chisholm, 2005; Armstrong 1999). Furthermore, Gokhale (1995) states, in addition to the need to perform, learners not only take ownership for their own knowledge but are responsible for their group members learning as well.

A strong case can be made that teacher intervention is significant in the success of group learning. Therefore "recognising and building on their knowledge and experience and responding to their needs" (Gultig et. al., 1998) is important for teaching and learning. Spady, Marshall and Rodgers (1994) further state that the learning process should be structured in such a way that all children can learn. However, Spady (1992) cautions teachers that although all children can learn, it does necessarily happen at the same time. The desired outcome of a learning task may not be achieved during peer collaboration as some learners within the group may require additional time to internalise, understand and master the skills needed to complete the task. Therefore, peer collaboration has to take into account and accommodate for different ways of learning as well as the rate at which learning may happen (Gultig *et al*, 1998). However, Gultig (1998) suggests that difficulties may arise as a result of a ratio of 45 learners to one teacher.

Berlach (2004) indicates that peer collaboration focuses on the ability of a learner to demonstrate the skills acquired during peer interaction rather than on the development of cognitive schemes. Thus suggesting that the quality of content internalised is of less importance than achieving the stipulated outcome. The challenge in creating successful learning across a spectrum of schools and learners is that the outcomes within in each

class are left to the interpretation of the teacher. The R-NCS (2002) seems to encourage personal interpretation of the curriculum as it is stated that there is "…considerable room for creativity and innovation on the part of the teacher in interpreting what and how to teach" (p. 12). Furthermore, Holt (1994 in Berlach 2004) expresses concern over teachers' interpreting curriculum because misunderstanding may occur. Holt (1994) states education should not be a consequence of specifically defined output measures but that it should develop the mind.

It appears that the education authorities expect teachers to meet the needs of each learner within the learning context and to successfully implement peer collaboration. In addition, teachers are expected to accommodate learner diversity (a mixed ability group) so that learning can be facilitated. Gokhale (1995) suggests that despite the differing levels of participation, when one learner attains success all learners share in that success (Gokhale, 1995). Thus, suggesting that the end result of learning is no longer attributed to an individual's personal effort and ability. Therefore, learners who do not actively participate in reaching the outcomes, but rely on others to do the work, still achieve the intended outcome. Gokhale (1995) states that it is not only the success that the whole group shares, but the individual development of critical thinking skills through the active exchange of ideas that is important. Gultig *et al* (1998) suggest that the effective development of critical thinking may arise within a group when individuals collectively value the process of sharing information and combining various views to generate individual knowledge.

Success is not only dependent on learners interacting within a group but the attitude with which the leaner approaches the task, the level of motivation, and interpersonal factors. Successful integration of the views of Gokhale (1995) and Guiltig (1998) will enable the individual to not only possess knowledge but to have knowledge, which can be used (Spady, Marshall & Rogers, 1994 in Armstrong, 1999, p 4).

The need to implement peer collaboration is a result of attempting to meet the outcome as stipulated by Critical Outcome 2. Critical Outcome 2 - as stated in the National

Department of Education Policy Document (1997 in DoE, 2000b) - indicates that all learners should be able to work effectively with others in various group settings (teams, organizations and communities). The need for paired work or group work is seen as a means through which all learners are to develop skills and all learners share the opportunity to participate in an activity. The R-NCS indicates that engaging in peer collaboration is a desired outcome but that it is also used as an assessment tool within the OBE classroom. This is stated under Informal and Continuous assessment in the National Department of Education Policy Document (1997). As listed under the heading of Informal and Continuous assessment, teachers are encouraged to observe learners within groups and simultaneously assess the learners' performance. It also provides guidelines for educators on how to use peer collaboration for assessment, namely that criteria for tasks should be clearly spelt out to learners beforehand leaving no area for misinterpretation. It also indicates that educators must have a "clear sense of the different learning styles of the learners in the class. S/he educator must also have a sense of those activities that are likely to succeed with groups and those that are unlikely to, and must plan to accommodate all learners in the class" (p.32). Thus peer collaboration, according to the assessment standards stipulated by the R-NCS, should allow for the development of the following: demonstration of skills, knowledge or values, and dealing mainly with observable tasks. Hence, the learners should be able to create, produce or demonstrate some skill. Gokhale (1995) is in favour of such collaborative learning if the aim is to enhance the learner's ability to think critically or to develop problem solving skills.

Marie and Coope, (2002) noted that effective and efficient peer collaboration requires a large amount of mediation and assistance from the educator. The ability to gain an accurate understanding of learner success is dependent on continuous assessment throughout the year. Strong continuous assessment also rests on sound and meticulous methods of recording learner progress. The teacher is not only expected to record results obtained through formal and informal assessments but to also assess the learner's attitudes and skills. It appears that learning is no longer seen in terms of increasing cognitive skills but is about the learner's attitude and skill. Learner attitudes and skills

are continuously emphasised in the R-NCS, even so, a vital aspect that is often overlooked is the educator's personal attributes. Rangraje *et al* (2005), indicates that the degree to which the educator over- or underestimates his/ her personal capabilities has a large bearing on how efficiently he/ she will use the skills s/he possesses to successfully implement peer collaboration.

Further influencing educator efficacy is the fact that OBE strips educators of their function within the classroom and in turn makes them merely educational technicians (Berlach, 2004). As a result, educators often see their role as facilitators, guides, curriculum developers and child minders (Berlach, 2004). Educators are often no longer valued for the knowledge they encompass. The reluctance to fully implement peer collaboration is not due to incompetence but a resistance to embrace the new education policy. The extent of an educator's sense of efficacy and resilience to withstand the demands of peer collaboration in the OBE classroom has an effect on how open and willing the educator is to be creative in order to meet the needs of the diverse learner group. Despite the requirement that educators should attend to the diversity of learner's individual needs, s/he is expected to produce evidence that 'learning' is taking place. Thus, the value of such meticulous recording of learner progress is debatable. There is scepticism about how accurately OBE can be interpreted and successfully implemented and consequently fewer and fewer educators are prepared to embrace OBE. However, peer collaboration is seen as effective by Gokhale (1995) when the teaching process is conceptualised as a means for enhancing and developing the learner's ability to learn. Consequently as implied by Marie and Coope (2002) and Gokhale (1995) the success or failure of peer collaboration depends on the preparation undertaken by educators, in developing lesson plans and planning tasks. Therefore, preparation should be made with an accurate understanding of the types of learners in the educator's class allowing the educator to create a framework wherein learning proceeds (Marie & Coope, 2002).

Expanding the concept of success through the use of peer collaboration Gelman and Greeno (1998) suggest that the success depends on the following three aspects; the level of the desirable student knowledge state, the level of the students entry state and the

learning process by which transition occurs from one to the other (in Marie & Coope 2002). However, Rangraje, van der Merwe, Urbani and van der Walt (2005) suggest that the success of collaborative work is not only based on the above mentioned three aspects but that an educator's self-perception of his or her competence in teaching as well as the value seen in carrying out the required task, affects the manner in which learning is made possible. It is important to consider Rangraje *et al*'s (2005) point of view as often educators feel that they are not supported, they have not been trained properly or they feel that they are not well resourced to provide quality education. This will have a significant impact on the successful implementation of peer collaboration. Nevertheless the importance of Gelman and Greenos' (1998) three aspects is that they provides a means for an educator to establish the level at which the learner is functioning and how to use collaborative learning appropriately to ensure that the learner meets the prescribed outcomes. This suggests a major shift from what is taught to what is learnt, resulting in the transfer of greater responsibility of knowledge acquisition, organisation and application from the educator to the learner (Marie & Coope, 2002).

Understanding peer collaboration

There are two fundamental aspects in collaborative learning: learner cooperation over competition and respect for varied experiences and backgrounds of members within the group (Bound, Cohen & Sampson, 1998). This is important as learners observe and internalise the process of learning through peer interaction, which, is modelled by their peers (Marie & Coope, 2002). Through internalising how group members approach and construct ideas during peer interaction the process of knowledge acquisition occurs. Collaborative learning offers a platform through which mastery of concepts can be gained as well as renegotiated. The renegotiation of constructs is vital as often learners bring naïve, incomplete or incorrect understandings into the learning situation, which may impede constructs that are more accurate (Marie & Coope, 2002). Considering the notion that learners may not have gained sufficient mastery of a task or concept it may bring about concern as to how effective collaborative learning is? Although peer

collaboration accommodates a various ways of learning and encourages learning, it also presents major pedagogical challenges (Bound, Cohen & Sampson, 1998). The particular challenges may be that of learners are substantially different in age, life experience and culture (Bound, Cohen & Sampson, 1998). The ability to interact, exchange ideas from a similar standpoint, and challenge each other becomes more difficult.

Boekaerts and Minnaert (2006) state that a learning environment, through collaboration, should encourage learners to view his/ her learning as an open ended process which also allows for the accommodation of other learners unique thought processes. Topping (1992) explains that previously the notion of peer collaboration was that learners who were more able would help less able learners by working in pairs carefully matched by the teacher. Suggesting that knowledge was not co-constructed but passed on, leaving the more capable learner with no new experience. Thus, peer collaboration was not seen as a means through which critical thinking was developed or promoted but as an effective remedial strategy which hoped for cognitive change in the less able learner. Consequently, Goodlad (1979) states that learning does not occur for both individuals. He suggests that those learners who are imparting information to other learners within their group need to make meaning of their knowledge and understanding. Regular feedback is received through interaction and this either reinforces concepts or promotes error correction. However, peer collaboration in the remedial sense is one sided and largely resembles the traditional method of teaching. More so, peer collaboration should highlight the importance of structured, task interaction and equal sharing and receiving of information. The group task should be structured in such a way that it allows for cognitive processing to occur as well as meaningful engagement with material selected from the environment. Whether peer collaboration is used in the context of remedial assistance or as intended by OBE practices, Boekaerts and Minnaert (2006) say that not all learners value the peer collaboration as being conducive in generating optimal learning experiences. In addition, learners who do not find peer collaboration of value tend to find the material inherently less interesting and are therefore less challenged to

regulate their learning process. They are more inclined to rely on others for guidance and help when the task does not appeal to them (Boekaerts & Minnaert, 2006).

The classroom environment is an important aspect of collaborative learning as learners interact directly with the material, gaining knowledge through observation as well as through trial and error. The learners' experience, from their own specific environment, brings variation into the group setting. Abercrombie (1974) draws attention to the advantage of group work as it facilitates understanding of information and not merely acceptance, therefore helping students to comprehend, grasp and make knowledge their own. Barnes and Todd (1977) suggest verbal construction is not sufficient to attain knowledge and that cognitive strategies should be used. Therefore drawing on previous knowledge and experiences and engaging on a cognitive level allows the individual to gain deeper understanding of material. Learners, therefore, have the opportunity to share their individual thoughts and formulate a general conclusion based on the sum of the shared ideas (Slavin, 1995a, 1995b in Summer, Beretvas, Svinicki and Gorin, 2005).
Barnes and Todd (1977) emphasise that although an individual's skills are important to achieve their personal goals within a collaborative setting, these skills will contribute to the group's ability to learn from each other.

It is apparent that learners who engage in meaningful peer collaboration and group work are given the opportunity to learn from their peers as well as develop more advanced thinking abilities. Cooper (1999) in Summer *et al* (2005) strongly advocates the positive gains of peer collaboration, namely that of conceptual gains and effective learning strategies. However, there is still a need to establish what kinds of social interactions promote what kinds of thinking abilities, at what ages, and in what manner. In trying to ascertain how effectively peer collaboration facilitates meaningful learning, the concept of learning needs to be explored. In addition to discovering how learning occurs, the role of others in learning also needs to be considered. The dynamics, which come into play within a group, may have an effect on the quality of learning.

Conclusion

"Motivation researchers have long defended the views that the quality of student engagement depends to a large extent on the perceived characteristics of the learning environment" (Ames, 1992; Maslovaty & Kuzi, 2002; Ryan & Partick, 2001 and Turner, 2001 in Boekaerts & Minnaert, 2006, p. 190). This statement highlights important issues such as a learner's specific context as well as the extent to which a learner values their learning experience. The context as well as the value placed in learning plays a significant role in promotion of successful learning. OBE tends to take a holistic view on how learning should happen as emphasis is placed on the context in which learning occurs as well as the personal attributes of the learner. Even though the educational authorities claim to take this into consideration when advocating principles of OBE in policy documents, they disregard the actual reality of many learners sitting in the classroom. Although the principles of OBE are well intentioned and great value is placed in collaborative learning, the extent to which peer collaboration initiates meaningful learning still needs to be established. Seemingly, the philosophy of OBE, particularly the concept of collaborative learning, looses sight of what school and meaningful learning are about. The notion that learners take responsibility for their own learning seems to be idealistic. As Boekaerts and Minnaert (2006) state that learners will not assume responsibility for their own learning unless they are truly interested in extending their repertoire of knowledge and skills. Considering the above mentioned aspects of peer collaboration, it appears that learners are more influenced by peer interaction than the material (Summers *et al*, 2005). Consequently, one begins to question the extent to which peer collaboration favours the facilitation of social development but negates the learning process (the acquisition of knowledge).

Peer collaboration is seen to resemble elements of the social constructivist theory, where the emphasis is on developing and adding to the thought structures of an individual

within a context however, it does not necessarily provide insight into the cognitive process of group interaction (Summers *et al*, 2005). This leaves room to question the extent to which educational implementations such as OBE are truly achieving the outcomes they desire. Malan (2000) concludes that there is not yet a collection of mutually accepted evidence that the intentions of OBE are attainable, thus suggesting that such a shift in education becomes debatable. Schlafly (1994) in Berlach (2004) states that "Outcomes-Based-Education is not education, it is experimentation. It is not academic, it is psychology" (pp 4-5).

On the basis of this chapter, it is important to ascertain teachers' perceptions of a practise such as group work and its efficacy in the classroom. In the next chapter, I review a theoretical framework that might help us understand the nature of group work and its role in learning.

Chapter 2 Theoretical framework

Introduction

The Revised National Curriculum Statement (NCS-R) encourages teachers to create an environment in which peer collaboration can happen, which then facilitates the learning process. Taking into account the NCS-R desire to facilitate learning through the use of groups, this chapter will explore how learning has been conceptualised by various theorists. Firstly, traditional views of learning will be explored, looking at how the particular views held by the theorist has contributed to the current thinking on how learning occurs. Thereafter, specific focus will be given to Piaget and Vygotsky's theories of learning. Piaget and Vygotsky's theories are seen to have a significant influence on present understanding of learning within various educational fields. Although Piaget and Vygotsky emphasise different aspects of learning, they both see the individual as being a central figure in initiating the learning process. However, Vygotsky emphasises the role of others in the context of learning and consequently, the role of others in the learning process is vital in evaluating the efficacy of peer collaboration. This will be explored, drawing upon the tenets of social psychology.

Traditional conceptions of learning

In its simplest form, learning is associated with the acquisition and retention of knowledge. However, different perspectives of learning have emerged. In the following discussion, I will discuss differing conceptions of learning.

According to Hergenhahn (2001), Functionalism seems to be the initial starting point in understanding how learning occurs. Dewey (1859- 1952) put forward a rationale for learning that was ahead of its time, indicating that learning should facilitate creative intelligence in children. In addition, Dewey stated that through teaching, children should learn the necessary skills needed to live effectively in society (Hergenhahn,

2001). Furthermore, Dewey suggested that learning should not be subject-orientated, but should rather be learner-orientated. In placing the learner as the focal point of the learning process, Dewey suggested that successful learning was facilitated through activity. Learning, as formulated by Dewey, was not rote memorisation of facts or exercises in order to advance the transmission of knowledge, but was aimed at developing problem-solving skills (Hergenhahn, 2001).

Thorndike (1874- 1949) provided a different perspective on learning. In some respects, Thorndike's view on learning is more traditional. He suggested that learning is an incremental process and occurs gradually rather than all at once. In addition, Thorndike suggests that learning occurs instinctively and is not mediated by thinking (Hergenhahn, 2001). Thorndike's explanation for learning occurring instinctively was based on the premise of his identical elements theory of transfer (Hergenhahn, 2001). In this theory, Thorndike states that information learned in one situation will transfer to another situation based on the similarities of the situation. Thus, transfer of information will occur completely if the situations are similar. However, if there are no similarities in the situations, the information learned will be of no value (Hergenhahn, 2001). Considering Thorndike's view of learning, it becomes apparent that he rejects the assumption that a learner enters into a learning situation already possessing knowledge learned through previous experiences. Hence, Thorndike advocates the view that learning should not strengthen the faculties of the mind but that through learning, transferable skills should be developed (Hergenhahn, 2001).

Although Thorndike's theories are located in the Functionalist school of thought, he set the foundation upon which Behaviourism is based. The Behaviourists suggest that all behaviour is learned. Learning occurs as a result of an individual observing a specific behaviour as well as the accompanying consequences following that behaviour (Pervin & John, 2001). Pavlov suggested that learning occurs when a neutral stimulus is paired with a particular response, and through a number of 'pairing trials', the neutral stimulus eventually becomes a conditioned stimulus producing a conditioned response. Conditioning occurs because of an individual responding to different stimuli in a

similar manner in order to achieve the desired response. Elaborating on Pavlov's classical conditioning model of learning, Watson suggested that learning occurs as a result of the principles of contiguity and frequency (Hergenhahn, 2001), implying that learning occurs when stimuli are arranged is such a way that it elicits a response that directly influences the behaviour. Furthermore, Watson believed an experience within a specific environment determines how a person responds and consequently learns (Hergenhahn, 2001). Following Watson, Skinner stated that a response represents the external observable parts of behaviour that can be related to events or experiences (Pervin & John, 2001). By contrast, to Watson, Skinner suggests that learning happens not because the environment causes a certain response, but because the individual initiates the response (Pervin & John, 2001). Consequently, Skinner proposed that learning occurs because it "operates on the environment in such a way as to produce consequences" (Hergenhahn, 2001, p. 391). Therefore, the learning process essentially involves the association or connection of response to events in the environment (Pervin & John, 2001). Skinner's theory of learning indicates that in order for successful learning to take place, the behaviour (engaging in the learning process, being active) needs to be reinforced by the context in which learning takes place. Therefore, in order for learning to take place the outcomes need to be seen as having an effect on the individual's future behaviour.

Additionally, Skinner suggests that repetition of a specific behaviour occurs because the environment reinforces the individual's behaviour and because the anticipated consequences are seen as favourable (Weiten, 2001). However, Skinner also acknowledges that not all behaviour may be as a result of wanting to achieve favourable outcomes; it can also take place to avoid unpleasant outcomes (Pervin & John, 2001). Successful avoidance of unpleasant stimuli also reinforces behaviour. Thus, during the learning process an individual may employ strategies that enable him or her to avoid attempting tasks because he or she may fear the consequences of engaging in that activity. Consequently, Skinner suggests that learning is governed by voluntary responses and not reflexive involuntary responses (Weiten, 2001).

By contrast, to the views of Pavlov, Watson and Skinner, Tolman provides a more "progressive" view on learning. Tolman (1886-1959) believed that learning is a continual process which is facilitated through an individual observing his or her environment. For Tolman, it is not only what is taught within the classroom that plays a significant part in the learning process, but also the interactions between the individual and the environment. However, Tolman argues, the degree to which the individual makes use of the information gained and how it is used depends on that individual's motivational state (Hergenhahn, 2001). Tolman's stance on the effects of motivation in learning provides valuable insight into learning in the twenty first century, indicating that if a learner is motivated, he or she will be more willing to engage in a learning activity. Additionally the learner's motivation suggests that the learner values the outcomes of the task and is willing to attempt the challenges set before him or her. The insight gained from Tolman is that unless a learner is aware of the relevance of the information (knowledge being that of facts, opinions and insights) being taught and can see a use for the information, the content (aspects that make up a particular subject matter) of the lesson will become immaterial. Furthermore, Tolman suggests, individuals are active processors of information (Hergenhahn, 2001) and consequently learning is a dynamic process. Tolman's theory of learning, by implication, describes the learner as being more active in his own education and highlights the importance of the environment.

Following from Tolman's theory of learning is Gestalt learning theory. The Gestalt school of thought suggests that learning does not happen in isolation and that things are conceptualised as "meaningful intact configurations" (Hergenhahn, 2001, p. 402). This theory suggests that learning does not occur by first looking at the individual components and then trying to understanding the whole concept, but rather the whole is examined first, and then the parts are understood. In this view, learning is a 'top down' process instead of the traditional view that learning is a 'bottom up' process (Hergenhahn, 2001). Furthermore, the Gestalt school of thought puts forward the notion that learning is goal-directed towards promoting purposeful behaviour (Hergenhahn, 2001). In addition, the Gestalt school of thought suggests that learning is

achieved through trial and error. More specifically through the disruption of a state of equilibrium (Hergenhahn, 2001). The Gestaltists suggest that when an individual faces a problem, the problem creates a disruption in the cognitive processes and the individual attempts to restore the equilibrium by solving the problem (Hergenhahn, 2001). However, the problem is not solved on the first attempt, but it requires several trials before a solution is reached. This suggests that through trial and error, insightful learning occurs. Köhler (in Hergenhahn, 2001) suggests that insightful learning occurs when the necessary devices are provided allowing the problem to be solved. Köhler indirectly seem to advocate the notion of scaffolding - mediating strategic elements in order to facilitate better understanding. In addition, Köhler states that insightful learning is better than rote memorisation or behavioural trial and error as the principles learnt are easily used in solving other problems (Hergenhahn, 2001). Thus for the Gestalt school of thought, learning consists of understanding the principles needed to solve a problem as well as understanding the relationships between concepts. However, Köhler indicates that the principles learnt and the understanding of relationships is not a specific response to a specific problem but that the principles and relationships can be transferred to other problems. Köhler has termed the transferability of principles and relationships as the theory of transposition.

According to Hergenhahn (2001) Gestalt, psychology provided the foundation for Cognitive psychology. Cognitive psychology endeavoured to understand how individuals learn by attempting to discover how individuals think and how information is processed (Hergenhahn, 2001). The Cognitive psychologists showed that memory, concept formation, attention, reasoning, problem solving judgement and language are vital in learning. For example, Fredrick Charles Bartlett (1932 in Hergenhahn, 2001) indicated that learning occurs as a result of information always being encoded, stored in an individual's memory, and then recalled. In addition, Bartlett stated that the success of encoding, storing and retrieving information is dependent on the preconceptions and attitudes of the individual (Hergenhahn, 2001). Bartlett's viewpoint that the individual's preconceptions and attitudes will affect learning seems similar to that of Tolman's view that motivation affects learning. This view suggests that learning is not

merely based on the result of stimulus-response reinforcement, but rather that learning transpires as a result of the interplay between different concept structures held within the mind. The view that learning happens as a result of the development of cognitive structures, developing over time resembles tenets of Piaget's theory of learning.

Piaget and Vygotsky's views on learning

Piaget and learning

The concepts of development and learning are frequently used in the educational environments but the distinctions between the two are not often understood. It is vital that the differences between these concepts are understood when exploring how successful learning occurs. Piaget (1964) sees development and learning as two different processes, which cannot be seen as synonymous. Piaget (1964) states that development precedes learning, which means his theory is fundamentally one of development and not about learning. However, his theory is often used to describe the process of learning. Specifically, the processes of assimilation, accommodation and equilibrium (these three concepts are discussed later in this chapter) are used to describe the process of learning even though these concepts were originally used to describe development.

For Piaget (1964) development explains the process of learning, which is contrary to the view that development, is as a result of the sum of discrete learning experiences. Piaget suggests that the development of knowledge is spontaneous due to the development of mental functioning. Thus, the totality of biological and psychological functioning arises in relation to the construction of knowledge. So Piaget proposes that knowledge increases in organisation, through adaptation and then through the active construction of knowledge that occurs as a result of maturation (Piaget, 1964). .The active construction of knowledge happens as a result of wanting to overcome conflicts with the environment, which involves the individual. Furthermore, Piaget describes

development as being a causal sequence of events that consists of stages in which complexity and organisation increase (Kitchener, 1978).

For Piaget development happens in four stages: sensorimotor, pre-operational, concrete operational and formal operational. An individual develops by progressing through Piaget's four stages. According to Piaget, each stage of development will determine what can be learned. Consequently, a child whose thinking is egocentric will have great difficulty in peer collaboration, as they are unable to see things from the perspective of another.

However, Piaget states that the creation of knowledge never occurs in isolation, as Piaget (1964) indicates that development is dialectical in nature. Knowledge, therefore, is an operation for which an interiorised action has occurred and therefore modification of the object is possible. Hence, the development of an individual is linked to other operations and which are included as part of the whole. Despite the manner in which the knowledge is gained, the subject is always active in achieving 'knowing' and consequently is faced with external disturbances. Society plays a significant part in the individual's development. The individual succeeds in reinventing, or in creating intellectual structures only as a result of collective interactions. The interactions occur in a social and cultural context, facilitating disturbances within the individual's already existing schemes to create disequilibrium. Compensating for the disequilibrium the individual will tend towards equilibrium (Piaget, 1976)

The disturbance in cognitive equilibrium is what allows development to occur. Therefore, development is provoked by an external situation (Piaget, 1964). Piaget's view on development (which facilitates learning) differs from that of the behaviourists insofar that he believes that a response comes before a stimulus (Piaget, 1964). Piaget states that

> A stimulus is only a stimulus to the extent that it is significant and it becomes significant only to the extent that there is a structure, which permits

> assimilation, a structure which can integrate this stimulus but which at the same time sets off a response (Piaget, 1964, p.131).

Due to the development of an individual's mental functioning, a deduction can be made that learning may occur as knowledge is spontaneously generated. Piaget (1964) indicates that development (learning) occurs if the developmental (learning) structures that are more complex are based on simpler structures. According to Piaget, the child develops (learns) as the "child's interactions become more complex and adaptive as the cognitive structures become more articulated through maturation and experience" (Hergenhahn, 2001, p. 537) However, in order for development (learning) to occur Piaget maintains that an ongoing process of adaptation needs to happen. Piaget suggests that development (learning) is as a result of doing; consequently the individual is active in his/ her learning process. Adaptation requires the individual to organise and reorganise information and experiences (Donald, Lazarus and Lolwana, 2002). This suggests that doing (learning) is continuously linked to other operations. Therefore, development (learning) is initiated by going from the unfamiliar to the familiar (Juckes, 1991).

Piaget suggests that learning arises due to the development of cognitive schemes. According to Piaget, an individual's scheme is a result of organised clusters of knowledge, which are abstracted, from the individual's previous experience (Weiten, 2001). These experiences allow the individual to become more flexible in his or her thought patterns, and thus more adaptable. Adaptation happens as a result of three things: assimilation, accommodation and equilibrium. Piaget indicates that assimilation occurs when new information arises and the new information can easily fit into the individual's existing scheme. Successful learning therefore is possible when active assimilation arises (Piaget, 1969). Assimilation is defined as the process that allows the learner to integrate new information into his existing scheme (cognitive structure). A scheme develops at the point at which something is first learned (Juckes, 1991). Schemes are then retained and provide a conceptual framework from which an individual can organise, interpret and process information (Santrock, 2003). Thus,

through integration, a learner builds his or her internal scheme or responses (Donald, Lazarus & Lolwana, 2002). Natural concept relationships also develop through assimilation without relying solely on external reinforces. Thus, assimilation allows for the addition of new information to already existing information. Therefore, the individual does not experience any cognitive discomfort when confronted with the new scheme.

In contrast, accommodation arises when the individual is confronted with information that contradicts the individual's existing information or scheme. Accommodation therefore, requires the individual to adjust and reshape existing schemes so that the new information can be added to the already existing schemes (Donald, Lazarus and Lolwana, 2002). Assimilation and accommodation occur as continuous processes that allow the individual to reach cognitive equilibrium. Considering that, knowing (learning) is an active individual process in which there is a constant ebbing that occurs between the unfamiliar to the familiar. Consequently, the individual will encounter disturbances in his or her cognitive structures. During the learning process, Piaget (1964) indicates that an individual goes between equilibrium and disequilibrium. Disequilibrium happens as a result of cognitive conflict. During this time, the individual is challenged to modify his or her existing scheme. For Piaget, disequilibrium refers to the disturbance created by going from the unfamiliar to the familiar. However, learning only occurs as a result of disequilibrium, as an individual wishes to maintain a state of equilibrium and can only do so by resolving the unfamiliar. The result of reaching equilibrium is that the individual has learnt something and has developed effective ways of organising and dealing with the world (Donald, Lazarus and Lolwana, 2002).

Moving from disequilibrium (unfamiliar) to equilibrium (familiar) implies that the individual would have to consider multiple perspectives. Piaget (1964, 1969) suggests that an individual's thought is provoked to levels of cognitive discomfort. Piaget proposes that during the state of disequilibrium an individual learns to create relationships, which are relevant to already existing cognitive structures. Further

equilibration allows cognitive structures to form and therefore allows new solutions to be assimilated into already existing structures. During equilibration, an individual is able to eliminate contradictions, incompatible ideas and conflicting notions (Piaget, 1969).

Bagus (in Court, 1999) illustrates that equilibrium is a process, which allows for the increase of knowledge, from lower to higher cognitive process. The movement from lower to higher cognitive process is as a result of the individual self- regulating his or her process of learning. Consequently, Piaget suggests that through disequilibrium, a higher quality of understanding occurs. It is important to note that self-regulation during learning is an individual process and thus Piaget indicates that an individual is ultimately responsible for his or her learning. Piaget (1964) maintains that learning occurs if the concept that the teacher wants to teach is supported by simpler, more elementary structures.

Although Piaget's theory of learning is seen as part of cognitive psychology, Piaget had a large influence in the formalisation of the constructivist theory. Constructivism not only acknowledges the cognitive attributes of an individual but that an individual is unique with unique needs and background. Thus, learners come into the learning context (classroom) with neither the exact experiences nor the same understanding of concepts. When learning is conceptualised, an immediate assumption made is that learning is a by-product of teaching. However, Piaget states that teaching and learning are two very different concepts (Piaget, 1978, in Smith, 1996). Teaching as defined by Piaget is a process designed to enable learning to occur. The most important aspect is that, although the act of teaching occurs, the quality of learning that transpires is different (Smith, 1996). Gredler (1997) puts forward the fact that learning occurs as a result of mediation by a more knowledgeable other to the learner through the teaching process. Gredler's (1997) view on how learning occurs resembles aspects of Vygotsky's theory of learning. Where Piaget focused on the developmental aspects of learning, Vygotsky focussed on the social aspects of learning and how social interaction influences learning.

Vygotsky and learning

Vygotsky views learning as a web of interactions (Smith, 1996). Suggesting that learning is not a solitary process but that there is a connectedness between how an individual learns and his environment. Therefore, Vygotsky's theory emphasises the active role an individual plays in his learning (Donald, Lazarus & Lolwana, 2002).

In contrast to other theorists, Vygotsky states that learning is not achieved in isolation, but stresses the role of a mediator (Donald, Lazarus & Lolwana, 2002). The mediator is seen as a more knowledgeable other who is able to facilitate the learning process. Smith (1996) point out that it is through a shared activity that more complex constructs of knowledge are attained, further acknowledging that knowledge is not fixed or given but that knowledge is shaped, constructed and reconstructed in different social settings. Vygotsky saw mediation as a means through which successful learning could take place. Mediation is used when a child is in a 'critical space' of gaining new understanding (Donald, Lazarus and Lolwana, 2002). The 'critical space' of learning as defined by Vygotsky is the Zone of Proximal Development (ZPD) "it is the distance between the actual level of development as determined by the independent problem solver and the level of potential development by the problem solver under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978 in Moll, 1994, p.336). A child whose learning in the ZPD is aided by mediation to gain new constructs (learning) allowing for enhanced understanding (knowledge) of concepts (Donald, Lazarus and Lolwana, 2002).

Vygotsky's theory of learning, in particular the two aspects of mediation and the ZPD, indicates that cognitive growth emerges as a result of interacting with adults or with individuals who have gained mastery over a particular skill or knowledge domain (Moll, 1994, van der Veer and Ijzendoorn, 1985).

It is important to acknowledge that learning occurs on both fully established and not yet fully established constructs (schemes) (Vygotsky, 1978 in Kozulin, 1998,). Further mastery of certain skills or learning areas can be understood as being inherently located within the individual's socio-cultural history (web of connectedness) (Wertsch & Sohmer, 1995). Wertsch and Sohmer (1995) indicate that learning is not an individual activity but that it is shaped by the events that preceded the individual within his/her particular context. Furthermore, Vygotsky points out that learning is as a result of observing and replicating certain actions that aid the construction of knowledge. According to Vygotsky, an adult whose constructs are socially embedded are able to impart knowledge through social interactions to facilitate learning. Taking cognisance of this an individual's learning should be a constant interaction between the more knowing other and the learner. The role of the mediator is vital in engaging the learner in the collaborative learning process. The mediator supports the learner through the differing levels of understanding.

Daniels (2001) brings to the foreground a critical aspect in Vygotsky's social construction of knowledge (learning) that, when learning, an individual continuously is an active agent and is equally influenced by the contextual situations. Vygotsky further highlights that continuous integration takes place between the external worlds of the learner into the learner's internal world. Portraying the need for the learner to continuously renegotiate his/ her existing constructs (Moll, 1994). The renegotiation of constructs is as result of the learner being challenged to alter his/her present understanding (Smith, 1996).

The social psychological understanding of others in learning

Although both Paiget and Vygotsky acknowledge the influences of the social context on the learning process, they seem to focus more on the individual within the social environment. The effect others have on an individual whilst in a group learning situation has not been sufficiently theorised. Therefore, it is important to focus on the roles of others by taking into account relevant concepts from social psychology.

Inasmuch as learning is seen as a social interaction, group dynamics and their influences on learning allow for a more comprehensive understanding.

In my view, the importance of peer collaboration could be traced back to some of the theoretical writings of Piaget but more especially to Vygotsky. However, these theories tend to focus more on the cognitive dimensions of learning and not sufficiently on the social dynamics of learning. Aspects such as group conformity, attributes of the members as well as participation will have an influence on learning being successful. For the purpose of this report, it is important to highlight how certain concepts within the framework of social psychology have bearing on effective peer collaboration.

Social psychology, in particular social learning, is often associated with Bandura's social cognitive theory. Bandura (1986 in Huitt, 2006) states that learning occurs as a result of transactional exchanges between the person and the context. Indicating that social learning is a bidirectional process, necessitating input from both the individual and his/her existing context. Additionally Santrock (2003) suggests that through encountering new experiences, the individual's previous experience alters. Through learning, the changes come about influence the individual's behaviour. Bandura's belief is that people are largely shaped through their learning experiences. It is important to consider Bandura's concept of learning when attempting to understand peer collaboration within the classroom context.

As suggested by Bandura (1986 in Huitt, 2006), in order for the learning experience to have value, the individual needs to meaningfully interact with the world. It is the individual's immediate context, which guides the individual's learning process. Consequently, the constant interplay between the individual and the context gives rise to what Bandura calls "reciprocal determinism" (Bandura, 1986). Reciprocal determinism suggests that learning is as a result of three interacting factors: internal mental events, external environmental events and the overt behaviour of the individual. Considering the dynamic interplay of internal mental events, it becomes evident that cooperative learning relies not only on the cognitive structures the individual possesses

but also on the beliefs and attitudes held by the learner. The beliefs and attitudes of a learner that tend to influence the degree to which the learner/s values the cooperative learning experience. Although an individual's opinions and perceptions are dominant during learning there are two other aspects that need to be considered; that of attribution and motivation.

According to Feldman (2001), attribution may be defined as the manner in which individuals seek to understand the reasons as to why a certain type of behaviour arises or what causes the outcomes of a particular event. Wiener (1980, 1992) explained that there are three aspects that underlie the process of attribution; (1) that behaviour must be observed or perceived, (2) that the behaviour is seen to be intentional and that (3) the behaviour is seen as being affected by internal or external causes. By means of the above three factors mentioned Feldman (2001) suggests that an individual then acts as a naïve scientist whereby the individual weighs up and combines different sources of information to either understand the outcomes of an event or a particular behaviour. An additional three aspects explain the ways in which attributions are made. The first explanation is that an event or behaviour outcome is as a result of internal or external factors. Wiener (1980, 1992) indicates that individuals are more likely to attribute success to internal attributes (skills, strengths and cognitive ability). Therefore, the person is seen as being directly responsible for the success of the event. However, failure is more likely to be attributed to situational factors, which are influenced by the individual's environment. Therefore, the behaviour is seen as being motivated by something that is external to the individual. Secondly, the stability of the environment explains the resultant behaviour. Wiener (1980, 1992) proposes that if the individual sees the environment as being stable he/ she assumes that if the same behaviour is repeated it will result in a similar outcome at a later stage. However, if there is a lack of stability the individual becomes unsure of the probability of the repeated behaviour having the same outcome. The last factor used to explain behaviour is the degree of control the individual is seen to have over the outcomes of an event or behaviour. The level of perceived control allows the individual to see him/herself as being able to control the outcomes. An important aspect of attribution theory is that it influences an

individual's perception of his/ her behaviour as well as other's behaviour. More so attribution illustrates that the interpretation of an individual's behaviour as well as others is done in such a way that it allows the individual to maintain a positive self-perception (Wiener article).

In attempting to understand collaborative learning, attribution, theory is considered valuable. According to attribution theory learners will participate in a collaborative learning task only as far as the outcomes can be seen to have a positive influence on the individual as well as produce a positive outcome. Furthermore, engaging in a collaborative learning task the attributions made will influence the individual's level of motivation as well as the amount of effort expended in order to complete a task. This suggests that learning does not rely on cognitive processes only but that it includes the individual's perception about the likelihood of success or failure. During collaborative learning, the process of attribution becomes stronger as each member attributes different characteristics to other members of the group as well as the probability of a particular member assisting the group to achieve success.

Attribution suggests that collaborative learning is a result of the learner not only engaging in the task but also observing others behaviour (Santrock, 2003). Therefore, the observation of others is vital in the learning process. Through the observation of others, understanding is gained as well as possible explanations for the observed behaviour. Santrock, (2003) further highlights that the level of motivation an individual has influences his/ her willingness to engage in a task. Additionally, learning is successful only to the extent in which meaning and value are assigned to a task as well as the individual's level of motivation.

Motivation may be described as the manner in which an individual participates in a particular activity. According to Fiske (in Feldman, 2001) the likelihood of an individual undertaking an activity relies mostly on the importance attributed to the task which, consequently, is influenced by the goals, motivational levels and needs of the individual. Therefore, suggesting that if an individual does not identify with the goals

and does not value the learning task he /she will lack the motivation to engage. Motivation can be classified into two categories intrinsic and extrinsic. With reference to learning, intrinsic motivation may be described as the desire of a learner to engage in learning in order to satisfy internal needs. Therefore, a learner engages in a task in order to satisfy personal outcomes. In contrast to this is extrinsic motivation is as a result of the learner engaging in an activity merely to satisfy external demands i.e. completing a group task (Feldman, 2001).

In addition to an individual's level of motivation, determining the extent to which an individual participates in a task is the individual's level of self-efficacy. Self- efficacy as indicated by Bandura is an individual's personal belief about his or her on ability to perform a specific task, leading to the desired outcomes. In addition to the belief of one's personal capacity to perform a task is the ability to effectively cope with a specific situation and to implement a strategy to reach the desired outcomes (Bandura, 1997 in Weiten, 2001). Furthermore, it appears that high or low levels of self-efficacy will be influenced by the specifics of the required task. Therefore, a learner who views himself to have the required skills for a mathematics task may not view himself as having the skills needed to carry out an art project. As a result, the learner will be reluctant to undertake the task, as the outcome holds no value for the learner (Pajares, 1996).

The importance of understanding self- efficacy in cooperative learning is that high or low self- efficacy will ultimately affect the extent to which each learner participates. In addition to self-efficacy, the outcomes of the tasks need to be seen as valuable by the learner in order to initiate meaningful engagement (Pajares, 1996).

In reviewing the notion that individual learning interactions are multifaceted and that the individual does not exist in isolation, it becomes apparent that an individual's experiences within a specific context, motivation and self-efficacy all play a role in facilitating successful learning. However, the notion of peer collaboration does not

focus solely on the individual within the group but how each individual is integrated into the larger whole to facilitate successful learning.

Several aspects need to be considered when evaluating the success of a group. The first aspect is that of conformity. Santrock (2003) and Feldman (2001) state that group conformity occurs because an individual chooses to coincide more closely with the group standards. In addition, the degree to which the individual's behaviour changes is dependent on the desire to be affiliated with the group and align with the group norms. Feldman (2001) suggests two tenets which facilitate group conformity, that of normative social influence and informational social influence. Conformity due to normative social influence takes place because there is an intrinsic need to gain approval from the other members within the group. Whereas informational social influence encourages conformity because an individual perceives the other members to possess information that he/she does not have and thus conform in order to gain the desired information. Therefore, individuals conform because they are able to gain something from being part of the group experience.

Further, the desire to be associated and accepted by a group illustrates the notion that groups have a large amount of social influence over an individual. In part, social influences occur because of conscious or unconscious adherence to group norms. Group norms create the structure wherein the group functions. The norms of the group represent the shared problem-solving ideas generated within the group in order to achieve the expected outcomes (Argyle, 1969). The adherence to, and acceptance of, group norms allows the group to successfully cooperate as a unit. This occurs when all are working on the same goal/ outcomes. In addition to the norms creating the platform for success, the role that each member undertakes within the group is also vital. A role may be described as how each member behaves in order to reach the desired outcomes of the task (Santrock, 2003). Each member is seen as being responsible for completing a specific task in order to reach the group goals. The responsibility taken in completing a task depends on the value that the individual assigns to his/ her role (Santrock, 2003). Additionally, successful fulfilment of a role predicts the level of group performance

(Feldman, 2001). It is neither acceptance of the norms nor the roles within the group that facilitates success but it is an acceptance of both that will allow for effective group cooperation.

Although individuals are assigned specific roles, the presence of others seems to have an effect on group performance. For Feldman (2001) the presence of others has a positive influence on an individual's performance. The presence of others may generate interpersonal competition, thus creating the desire to increase personal performance. Conversely, Zajonc (1965) suggests that the presence of others may have an adverse effect by decreasing an individual's performance. Social loafing adequately describes the decrease in an individual's performance when completing a group task. It appears that social loafing occurs as a result of an individual choosing less ambitious goals when others are present. This suggests that individuals are more likely to contribute less when working with others than when working independently (Karu & Williams, 1993 in Feldman, 2001). Social loafing is an important aspect to consider when examining the effectiveness of cooperative learning. Social loafing illustrates an interpersonal dynamic that is often overlooked. Therefore questioning whether or not cooperative learning facilitates effective learning as well as developing effective learning strategies during peer collaboration.

Conclusion

The process of learning is multifaceted. Since learning is multifaceted acquiring a concise definition as to what learning is becomes difficult. It appears that learning is a gradual process that proceeds as a result of trial and error experiences or as a result of being within a particular developmental stage. In addition, in order for learning to occur the individual has to be seen as being an active participant in his/ her learning experience. It appears that the level of a learner's active engagement is seen to be directly linked to his/ her motivation level. The level of motivation a learner has when engaging in a learning task is as a result of information having value. Learning is often seen as an individual task in which the learner assumes responsibility for his/ her

learning. Although learning is an individual experience, it requires interaction with others. The role of others in the learning process may be as a result of the individual being challenged by contrasting views, which creates discomfort within the individual and initiates the renegotiation of prior knowledge. Additionally, interactions with a more knowing other may arise by means of mediation in order to move from an existing knowledge base to a more complex knowledge base and understanding. Lastly, learning may result due to collaborative interactions within a group order to achieve a common goal or outcome.

Collaborative learning presents new challenges for learning. Collaborative learning has to take into account not only the individual but also how each individual contributes to facilitating successful learning. Within the collaborative learning experience, each individual's unique characteristics come into play affecting the overall success of the group. The overall success of learning within a group seems to be dependant on the attributions made about the group by each individual. The degree to which an individual participates can be as a consequence of motivation as well as being perceived as part of the group. Learning within a collaborative group may increase the individual's performance; however, it may also have the adverse effect. One particular phenomenon is that of social loafing. Social loafing impacts not only the group achieving the desired outcomes but also on the individual, repressing his/ her ability to learn successfully. Therefore, in order for collaborative learning to be effective, learning theories focussing on the individual as well as theories within the domain of social psychology need to be combined. The combination of individual and collaborative learning is ideal to facilitate successful learning. After careful consideration is given to the South African context and the ratio of teacher to learner, the successful implementation of peer collaboration may become more of a challenge.

Chapter 3: Research method

This chapter includes the research method used to collect the data in order to answer the research questions. It further sets out to provide a description of the sample of participants. Lastly, it will address the ethical considerations that were taken into account in conducting the research as well as the limitations of the research.

Research Questions

To establish the teacher/educator's understanding of peer collaboration/collaborative learning within the context of the Outcomes Based Education (OBE) classroom and their perception of the efficacy of peer collaboration/ collaborative learning, the following questions were formulated:

1. What are teachers perceptions of OBE?
2. How do teachers implement peer collaboration within the classroom context?
3. What are teachers perceptions of the efficacy of peer collaboration in learning?
4. How do teachers assess that successful learning in the context of peer collaboration has taken place?

Procedure

The research was conducted in five schools in the Gauteng area. Before the schools were approached, the researcher applied to the Gauteng Department of Education for permission to conduct the research in schools. A copy of the research proposal was submitted together with a provisional questionnaire. Once permission was granted (see Appendix A) the researcher began approaching schools. Although the researcher had submitted a list of five proposed schools, due to the timing of the research four of the

original schools declined participation in the research. The researcher then approached other schools to participate in the research. The first school was in the far Northern Suburbs. The researcher contacted the school telephonically and requested an appointment to see the principal. Although a request was made to see the principal, permission was given over the telephone to do the research in the school after the nature of the research was discussed. The researcher requested eight teachers to volunteer for the research. The principal was asked to sign a consent form stating that consent was given to the researcher to conduct research in his/ her school (see Appendix C). Thereafter each teacher was given an information letter (see Appendix B), questionnaire together with a consent form (see Appendix D) explaining the nature of the research and that participation was voluntary and that they could withdraw at any point. Furthermore, the teacher volunteers were assured of their anonymity when completing the questionnaire. In addition, they were assured that all responses would remain confidential.

The second, third, fourth and fifth school were approached in a similar manner. Permission was obtained from the principals as well as from the teachers. The fifth school differed from the other four schools as it is a remedial school and therefore it was speculated that the responses provided by respondents in this school may differ due to the nature of the learning environment and how peer collaboration is implemented.

Sample

The researcher originally anticipated a sample of 40 teachers, however only 25 questionnaires were returned. The researcher made use of non-probability, convenience sampling. The sample was chosen for practical reasons, as part of the population was readily accessible. However, the sample may not be a true representation of the whole teacher population (McBurney, 2001).

The schools that participated in the research were state-funded, primary schools ranging from Grade R to Grade 7. All five schools have a mixed learner group (race, socioeconomic status and language). Three of the schools were situated in the Northern suburbs the other two schools were situated in the West Rand area. All respondents were female; however, age, teaching experience and qualification levels differed. Seven questionnaires were returned from school 1, five from school 2, two from school 3, four from school 4 and six from school 5.

Data gathering tool

In order to collect the required information needed for the research no existing instrument/s existed, it was therefore necessary to develop a questionnaire that would adequately explore the research questions (see Appendix E). The data was gathered by means of a structured questionnaire. The questionnaire was structured in such a way that it allowed the researcher to collect information from the volunteer teachers in a short period of time. Section 1 (see Appendix E) of the questionnaire contained closed questions which provided information on the teacher's level of qualification, number of years within the education field and the position held by the teacher. Section 2 of the questionnaire contained open-ended questions. These questions were used to ascertain the teacher's perceptions of peer collaboration in the OBE classroom as well as the efficacy of such collaboration. In addition, the questionnaire attempted to establish how effective teachers perceive peer collaboration/ collaborative learning to foster successful learning within the OBE classroom. The open-ended questions allowed for an in-depth exploration of how teachers viewed peer collaboration/ collaborative work.

Research design

The research design is qualitative in nature. Qualitative research allows for "acceptance by arguing for the importance of understanding the meaning of experiences, actions, and events as these are interpreted through the eyes of the particular participants, researchers…for a sensitivity to the complexities of behaviour and meaning in the

contexts where they… 'naturally' occur" (Hennwood, in Richardson, 1996, p.25). Furthermore, qualitative research allows for an understanding of the "mental mapping process that respondents use to make sense of and interpret the world around them" (UK Statistics). Therefore, qualitative research creates scope for a deeper understanding of a social phenomenon.

The questionnaire (see Appendix D) consists of two sections; Section 1 consisted of closed questions. These questions were used to provide a description of the sample group. The focus, however, will be on the open-ended questions in Section 2. The data collected from the responses to the open-ended questions will be analysed using "Thematic content analysis" (see below for a description).

Data Analysis

Thematic content analysis encourages the researcher to analyse the data from numerous perspectives particularly when the data is symbolic in nature (Krippendorff, 1980). By examining closely the data collected its underlying meaning can be explored (Zhang, 2006). It is important to explore the underling messages, as these messages are expressions from the participants reflecting how they view their social context (Zhang, 2006).

According to Boyatzis (1998), thematic content analysis includes three distinctive stages, firstly the researcher has to decide on a sample and a research design, secondly from the data collected the researcher then has to develop themes that represent the responses of the participants, and thirdly the research questions then need to be "validated" using the themes. Additionally, in the second stage the development of themes may be as a result of three things: the research being theory-driven, prior research, or because of the information obtained from the raw data (inductive) (Boyatzis, 1998). Information collected as a result of the three stage process tends to provide descriptions which are rich in detail, sensitive to the context and are sufficiently able to show the complex processes of social life (Neuman, 2003). The

researcher has to pay particular attention to the social context of the participants, as the premise is that within different contexts different views can be found.

Therefore, thematic content analysis consists of significant responses, which reflect the research question being investigated (Zhang, 2006). In selecting specific statements or views, the data provides a logical bridge between what data is already available to the researcher and what the researcher desires to know (Krippendorff, 1980). Furthermore, thematic content analysis provides a "method for the systematic interpretation of the content of text data through the systematic classification process of … identifying themes/ patterns" (Hsieh & Shannon, 2005 in Zhang 2006, p.1). The emphasis is on achieving an integrated view of the data as it allows the researcher to interpret the data in a subjective but scientific manner (Zhang, 2006).

The data is interpreted using themes. The emerging themes are used as a meaningful unit of analysis (Zhang, 2006). The themes aid the researcher in identifying the expression of an idea (Minichiello, 1990 in Zhang, 2006). The themes come from the "researcher's initial research question/s, concepts in literature, terms used by members in the social setting or new thoughts stimulated by the immersion in the data" (Neuman, 2003). As the themes emerge the researcher attempts to support or expand a conceptual framework/ theory (Zhang, 2006). Although numerous themes may emerge, the choice of a theme must be justified in aiding the researcher to find out what he/ she wants to know (Zhang, 2006). Therefore, thematic content analysis assists the researcher in answering his/ her research questions by analysing the expressions of the participants from their social realities.

In the present research, the method of thematic content analysis was used once the questionnaires were completed and collected from the participating schools. The biographical information in Section 1 provided the researcher with a clearer understanding of the sample. Section 1 also allowed the researcher to see if a correlation existed between the responses in Section 2 with the number of years of teaching experience. In Section 2, the questions posed related specifically to peer

collaboration. Questions 2.2.1 -2.2.3 related to how teachers actively use peer collaboration based on their understanding of OBE. Question 2.2.4 and 2.2.5 assessed aspects of group dynamics as well as how groups were formed. Questions 2.2.6- 2.2. 10 assessed teacher's perceptions on the efficacy of learning in groups.

Ethical Considerations

The researcher obtained ethical clearance from the University of the Witwatersrand (ethics number MED/06/001 H). The researcher abided by the principles of the University of the Witwatersrand as well as the Health Professions Council of South Africa of informed consent, confidentiality and anonymity and non-coerciveness. At the start of the research, the various principals as well as the teachers in specific schools were informed that all responses would be kept confidential, as no identifying information was required. The teachers were informed that the researcher and her supervisor would be the only ones to read the responses. Teachers gave their consent only after they had read the information letter (see Appendix B). Teachers gave consent having understood that participation is voluntary, that they may refuse to answer questions that they would prefer not to and that they may withdraw at any time during the study. Teachers were further informed that there would be no repercussions for choosing not to participate in the research.

Limitations of the Research

The following limitations should be noted:

First, the nature of the instrument used to obtain the data may have affected the information collected, as the questionnaire is not a standardised instrument. Therefore, the reliability and validity of the instrument is questionable, as it has not been validated on a larger sample. Secondly, the ability of the researcher to gain access to schools in a variety of socioeconomic contexts was limited. Accessibility was further limited due to

the time of the year[2] and as a result, many schools refused participation. Therefore, the researcher had to choose schools based on their willingness to participate. Thirdly, the sample was not selected randomly but was selected using convenience sampling. This therefore affects the extent to which generalisations can be made about teachers and their perceptions. Lastly, the sample consisted entirely of female respondents therefore the findings cannot be generalised to male teachers.

[2] The researcher could only visit the schools in the period close to examinations. Consequently, teachers were not as accessible during this period as they would have been earlier in the year.

Chapter 4 Presentation of results and discussion

The findings of this study will be presented in this chapter. Firstly, the data gathered in Section 1 of the research questionnaire is presented in three of the four tables below (See Appendix E) the fourth table represents the types of resources teachers used to understand OBE. Thereafter the data will be presented as themes. The themes emerged from the analysis of the teachers' responses in Section 2 of the questionnaire. This chapter will conclude with a discussion relating to the relevant themes.

Table 1: Age of the teachers

20 – 30 years	30 – 40 years	40- -50 years	50 – 55 years	55^{+}years
9	**6**	**6**	**1**	**3**

Table 1 indicates that more than half of the teacher sample falls between 30- 55^{+} years of age. From Table 1 it can be deduced that 64% of the teachers were expected to become familiar with OBE on their own as opposed to gaining insight (within the last 10 years) into the principles of OBE through their initial teacher training.

Table 2: Number of years teaching experience

$^{-}$2 years	2 - 5 years	6 - 10 years	11-20 years	21^{+}years
5	**5**	**6**	**5**	**4**

Table 2 suggests that 60% of the teacher sample initially taught using a teacher centred approach. These teachers' methods would have been based on a teacher centred approach. Their responses may indicate the extent to which they were successfully able

to modify their previous approach in order to implement a learner centred approach within the OBE framework. Additionally the insights provided by these teachers about the change in educational frameworks may contribute significantly to the understanding of how effective OBE is at facilitating learning.

Table 3: Highest level of qualification

Teachers diploma	Degree	Honours	Masters
11	**10**	**3**	**1**

The majority of the teachers have a teachers' diploma. This suggests that their studies may not have included the fundamental tenets of OBE. Furthermore, the assumption cannot be made that the 10 teachers who obtained a degree would have been exposed to OBE as part of their training.

Table 4: Exposure OBE information

R-NCS	University material	Information supplied by the Department of Education	Internet resources	Workshops held by the Department of Education
9	**6**	**6**	**1**	**3**

The results of Tables 1 to 4 support the fact that teachers had to be resourceful in gaining an understanding of OBE. From the documents read, it appears that teachers had to become familiar with the relevant policy documents themselves.. Furthermore, the table also indicates that there is no common understanding from a common document indicating that there is no common set of practices in implementing OBE

effectively. In addition, teachers who educated themselves indicated that although the R-NCS provides some detail as to what OBE entails, the terminology is often confusing which makes implementation even more difficult. Therefore speculation arises as to who guides the teachers through the labyrinth of OBE terminology and implementation? As many teachers echo teacher 19's view that "we had to figure out things [OBE] out on our own in our school".

Theme 1: Conflicting Perceptions of OBE

Theme 1 provides insight into what teachers perceive to be the core concepts of OBE. First, teachers see OBE as being a learner-centred approach where the emphasis is placed on meeting the learner's needs. The learners are also seen as individuals within the context of learning. Teacher 18 conceptualises learner-centred learning in the following way, "…learners are expected to solve problems on their own with minimal guidance and facilitation by educators". Additionally teachers 2, 6 and 12 indicate that within this approach the learners are seen as being active in their learning process. In addition to this teachers 2 and 25 state that a learner-centred approach does not 'spoon-feed' the learners but that it encourages the learners to become interactive members within the classroom context. Furthermore, there is the view that a learner centred approach allows learners the freedom to learn in a way that suits them. As teacher 4 states "learners are given the freedom to learn or work according to which ever method they find easiest." Teacher 21 succinctly sums up the view of the learner centred approach that emerged from the sample in the following statement "learners should be the focus, to gain a sense of where they are in order to envision they can and want to go".

Secondly, teachers' view OBE as placing a large amount of emphasis on meeting outcomes. Teachers view the central outcomes as being one of three things: either attaining knowledge, creating positive attitudes, or about developing skills. It seems as though the main emphasis is on assisting the learner to develop skills as emphasised by teachers 5, 8, 10, 11, 13, 14, 15, 18, 19, 20 and 24. Furthermore, it appears that teachers

favour the development of social skills above academic skills. A possible explanation for this may be that they feel that the learners need to be prepared for life and should be equipped with skills that will help them solve life problems. Thus emphasising the need for the teaching environment to be a place where the learner is prepared for life. More so, teachers feel that in implementing OBE they merely follow procedure in order to meet outcomes. As a result, the teachers feel that they are continuously planning lessons around meeting the assessment outcomes.

Although some teachers such as teacher 3 indicates, "[OBE] is not a new way of teaching, just a new mindset" many have a more negative perception of OBE. Teachers feel that it is not always easy to effectively implement OBE as teacher 13 states: "[OBE] looks great on paper. Reality of the classroom, South African context, and South African cultures are not included or addressed". Several teachers feel that in order for OBE to be effective there is a need for knowledgeable guidance and support from the Department of Education (DoE). Although in favour of the concept of OBE, teacher 24 states that, "all educators need to be more trained in all areas of specialised schooling". Furthermore, teachers feel that OBE is time consuming. This is evident in responses such as "it takes much time which we have little of" teacher 14, "it involves a great deal of paper work, so less emphasis on teaching time" teacher 2. In addition to OBE involving a large amount of paper work they feel that it is not well thought out, as the access to, and quality of, resources differ in schools, which makes effective implementation even more difficult. Although Teacher 7 states, "[OBE] is a good approach to teaching, children still need to be taught the basics from a teacher-centred approach to build a strong foundation". Teacher 25 agrees that OBE has merit, however, teacher 25 raises the following "that a combination of OBE and 'teaching basics' should show better results. At the present time something is very wrong, as we are producing school leavers (matrics) with seriously underdeveloped reading and writing skills", this view is of concern to teachers 1, 14, 16 and 19. It becomes apparent that there are more teachers who are despondent about OBE than teachers who feel assured that OBE is the correct educational framework as teacher 13 provides a noteworthy comment 'it [OBE] did not work in other countries, why are we different?"

Theme 2: Using peer collaboration in the classroom

There is a consensus on how teachers should use peer collaboration in the classroom. A significant number of teachers seem to feel that peer collaboration needs to be implemented only once detailed planning has occurred. Teacher 1 echoes this view as she states "…[peer collaboration] needs one to be dedicated in planning effective lessons", and Teacher 8 states the following "it [peer collaboration] works effectively if the lesson is planned well". Although teachers see the value in peer collaboration, they also feel that it is not an activity that should be used all the time. For example, Teacher 6 states, "[peer collaboration] must not be done all the time". Furthermore, teachers feel that when using peer collaboration as a tool for learning the learners first need to be given instructions as well as roles within the group. Teacher 22 defines the roles of learners in the group as follows "leader, scribe, time-keeper, a runner, trouble-shooter" she also states, "it is important that these roles switch each time, otherwise the same learners will act the same roles".

It appears from this sample of 25 that teachers have various ways of implementation. Paired learning is favoured above other options when teachers use peer collaboration in the classroom. The reason seems to be that paired learning seems to allow for more control in the classroom. Teachers also feel that paired learning ensures that the responsibility is equally shared and that there is less chance that one learner will not participate. However, the lay understanding of peer collaboration is that of groups (3 or more) of individuals working together. In such a situation teachers seem to pick the learners in each group. Thus, Teacher 8 suggests a way in which groups are formed in her classroom "I try to combine strong, average and weak learners in each group and I also take into account their personalities, as much as possible". Peer collaboration is also used in the form of class debates or class discussions, group research projects, and group presentations. As seen in Theme 1 there is no common understanding of OBE or

the implementation thereof and as a result, the implementation of peer collaboration is left to the teacher's discretion on how to optimally attain the outcomes.

In trying to gain an understanding as to how teachers use peer collaboration the following question was posed in Section 2 of the questionnaire (see Appendix E) "what activities do you as an educator engage with during peer collaboration?". The responses provided valuable insight into how teachers conceptualise peer collaboration. The responses indicated that teachers do not actively engage with the learners, teacher 24 indicates that she "Gives criteria. Explain the criteria. Then they must do the group work". Additionally teachers seem to give lists of what learners do in peer collaboration but very few indicate their active role in facilitating peer collaboration, some of the activities are "mind maps in pairs" Teacher 1, "brainstorming" Teacher 2, and "marking activities together" Teacher 4. A further interesting insight into the how teachers engage with learners to facilitate learning is that as Teacher 11 states "I walk around to make sure learners are doing their work, not talking about other issues", teacher 22 also has a similar view " …then keep an eye on them to make sure that they do what is expected of them". Other teachers feel that their role only becomes active when learners struggle. Teacher 17 states that "I help them if they get stuck". However, other teachers feel that they do not play a role in facilitating learning when learners work collaboratively "once I have taught the concept. Peers can help those who do not understand" Teacher 13. In addition Teacher 9 states "[peer collaboration gives] learners the space they need. By letting them use or be guided by their own ideas with little intervention from my side".

Theme 3: The efficacy of peer collaboration -social learning advocated above cognitive learning

The third theme focuses on the notion that social learning is emphasised over cognitive learning. There are two subsidiary themes that emerged: one is how collaborative

learning has an effect on both the ‘stronger’ and ‘weaker’ learners, and the second is the observed dynamics during peer collaboration.

More that half (14) of the teachers emphasised that during peer collaboration, life skills and values are learnt. 10 of the teachers indicate that such learning allows the learner to transfer skills, which makes him/ her more able to solve ‘life problems’. Some teachers feel more strongly about the importance of peer collaboration, Teacher 10 stresses that “group work teaches life skills which is definitely more important than content”. During collaborative learning teachers feel that learners learn more effectively because of their individual experiences which they share with other group members. Teachers see such learning as being effective because learners are better able to relate to each other. They also feel that the ‘stronger’ learners are seen as mentors to the ‘weaker’ learners. Additionally they feel that the mentorship creates an environment where concepts are reinforced. Furthermore, during peer collaboration the interaction encourages personal growth. Teacher 3’s justification for peer collaboration being a success is that “when you [enjoy] something you learn better and understand more”. Echoing Teachers 3’s view Teacher 10 states that when learners are motivated in their groups they “participate [more] which increases [their] concentration and understanding”.

Although 10 teachers feel that peer collaboration is effective in promoting learning, 15 felt differently. There is a perception that in the groups some learners do not participate and depend on the other groups members, this is voiced by Teacher 16 “some learners are working, some learners take a backseat”. Other teachers feel that the ‘slower’ learners get left behind while a third group felt that it is the ‘stronger’ learner who is held back which is expressed by Teacher 11 as follows: “stronger learners don’t benefit in the group situation”. Some teachers also feel that it is the learner’s attitude that affects the overall group learning experience: “learners often take comfort in the idea that if they are ‘lazy’ or slow it does not matter”. Teacher 22 expresses a different concern that in using peer collaboration “some learners become too interdependent and don’t learn to work independently”.

12 teachers observed that peer collaboration is a difficult task for the majority of the learners. This observation is based on the fact that conflict occurs frequently when learners need to work towards a common goal. It seems as though conflict arises when there is a learner who dominates, Teacher 3 states that "learners fight over who resumes leadership". Teachers feel that the element of competitiveness also adds to the conflict which happens in groups. Observations made by teachers during peer collaboration indicate that often when conflict arises learners "easily 'kick' people out of their group" (Teacher 3). They explain this behaviour being a result of whether or not a learner is socially accepted by his/ her peers (Teacher 13). A 12 teachers feel that there are two reasons for group conflict, firstly they feel conflict happens because of personality clashes as Teacher 6 states "some children cannot work together (clash of personality)". The second reason is that teachers feel that learners from foundation to intermediate phase are not emotionally mature to effectively make use of collaborative learning. Teacher 3 states, "Some learners are not at a level to handle certain activities". Teacher 5 states, "Learners don't have the skills to empathise and therefore, can be quite rude and mean to one another". Teacher 11 also states, "Learners need to grasp group skills and how to work effectively in groups. This only happens when they are older". Teacher 5 and 11's statement suggests that not all learners are at the same developmental level; therefore, the task of collaborative learning may be more difficult for some learners.

Theme 4: Assessing learning in the context of peer collaboration - a 'tug-of-war' between assessing collaboratively and individually

Theme 4 indicates that teachers feel conflicted as to their ability to accurately assess leaning as it happens during peer collaboration. All teachers agree that learning can be assessed. However, the differences come about in the method of assessment. Some teachers feel that individual learning can be assessed in the context of peer collaboration. Teachers with this view feel that rubrics provide an accurate

interpretation of the learner's newly gained knowledge. These rubrics used to assess learning can be completed either by the teacher or by the learner "often a peer assessment rubric is handed out for each group member to fill in and be honest about his/herself and fellow members contributions" (Teacher 18). When learners complete the rubric, they are assessing themselves and their peers. Another approach teachers use to assess collaborative learning is by looking at the end product the learners produce. The last approach that a significant number of teachers use is discussion. However, the forms of discussion vary, some teachers use one-on-one discussion "I can assess them orally" (Teacher 22), others use class debates "debating" (Teacher 3) "posing questions to the class" (Teacher 8), "ask for their opinions" (Teacher 2), lastly group discussions "I talk to them about what they learned" (Teacher 11). Teacher 15 has a different view on how she is able to assess that learning has occurred for her it is when learners are "able to assist others".

In contrast to teachers' perceptions that they can assess learning in the context of peer collaboration Teacher 4 states that it is "No use assessing in groups because ultimately there will be 1/ 2 learners who go with the flow and don't contribute to the lesson". Teacher 16 feels that it is "not always possible to verify that individual learning has taken place". Teacher 18 states that although group interaction happens she prefers "individual assessment tasks as they accurately reflect ones abilities and no-one can 'sponge-off' another member". It seems as though a significant number of teachers have a similar view to Teacher 18 as they support learners working together but then separating learners in order to complete individual tasks. Teacher 19 states, "I usually let the groups work together but each child is responsible for completing their own work whether it be written work in their books, a worksheet, questionnaire etc". Teachers also make use of other individual assessment tasks such as "consolidation activities" (Teacher 19), "spot checks" (Teacher 22) as well as learners' ability to answer questions posed to them.

Other teachers seem uncertain about assessing learners in the context of peer collaboration. Teacher 18 states that "sometimes the learners internalise what their

members contribute and reflect on it. Whereas [others] feel they can switch off". Teacher 5 also feels that "sometimes peer collaboration is effective but at other times peer collaboration is fruitless". Although there are some teachers who agree that learning can be assessed within the context of peer collaboration, either as a group or individually, it seems that the task of assessing individual learning is the more difficult part. Teacher 12's view presents a valid thought that "the one cannot replace the other and both have benefits".

Discussion

The sample of participant teachers all have an accurate understanding of OBE's learner-centred approach. They further acknowledge that the learners' needs should be considered in order to facilitate learning for all.

However, what does become apparent is that teachers seem to "mouth" what OBE is about as it seems that there is little understanding of the deeper implications of OBE. Teachers encourage life-skills education rather that academic education. According to Donald, Lazarus and Lolwana (2002), life skills education is "aimed at developing attitudes, skills, insights and knowledge, which facilitate effective engagement with life and its challenges" (p. 16). Although OBE policy encourages life skills education in order to enable all learners to learn, it also advocates the promotion of healthy learner development. Healthy development as defined by Donald et al (2002) is that it "includes all the physical, cognitive, emotional, social, moral and spiritual aspects of development" (p.26). However, it appears that the cognitive aspect of healthy development has been forgotten in favour of social development. This is evident in the responses made by the teachers as none referred to OBE as developing the cognitive aspects of learners.

Jansen and Christie (in Eloff & Ebersöhn, 2003) state that OBE and the learning process draw on the broad philosophy of learner-centred education which they claim is consistent with Piaget and Vygotsky's views on the importance of active learner

engagement. Largely, teachers do acknowledge the importance of learners being actively involved however, they do not see themselves as being a vital component in learners' active engagement. Many teachers view themselves as observers who "walk around" or "keep an eye on" the learners while the process of peer collaboration is taking place.

If Piaget and Vygotsky's theories of development are being used it seems that the intended understanding of their theories have been distorted. Vygotsky states that development occurs through social interaction. Although this part is understood by teachers the following is not, viz., that social learning requires active mediation from a more knowledgeable other. Therefore teachers 'walking round', 'keeping an eye' does not constitute active mediation. For Vygotsky mediation is "helping a child through the proximal interactions to construct a new level of understanding" (Donald et al, 2002, p.71). Vygotsky's intended use of mediation was to encourage learners to move from the familiar to the unfamiliar. He describes the space between the familiar and the unfamiliar as the Zone of Proximal Development (ZPD). The ZPD is better understood by defining it as that which lies just beyond the child's present understanding (Donald et al, 2002). Implying that teachers need to engage with <u>each</u> learner to construct a new level of understanding based on where the learners current understanding lies. Therefore, teachers cannot be observers if mediation is correctly carried out. The most important aspect of mediation is that teachers need to "connect with each student's potential understanding in the ZPD, and then, through the process of mediating, helping and facilitating them to grow to new levels of understanding" (Donald et al, 2002, p. 73).

Piaget's perspective also needs to be considered as Jansen and Christie feel that his theory also informs current perceptions of learning. Although Piaget's theory seems to focus on the individual, he does take into account the importance of the social context in facilitating learning. Youniss and Damon (in Belin and Pufall, 1992) state that for Piaget (1932), education should not be "of master and pupil, that is the relation of an inferior who passively obeys an superior" (p. 24), but rather education should stress

“group work, common study, [as] only a type of education founded upon social relationship… will allow of the development of sane moral and international attitudes and make our children a finer generation than ourselves” (p. 25). Therefore, Piaget (1932) does advocate collaborative learning. However, the manner in which learning should take place is not considered. Piaget encourages cognitive conflict between learners. Piaget’s notion of cognitive conflict is not the same conflict that is mentioned in the responses from the sample of teachers.

The conflict mentioned by the teachers resembles the conflict that would happen during Piaget’s concrete operational stage. As during this stage the learners’ thinking is becoming less egocentric, however, there are still traces of egocentrism. It is important to take into account that although learners may be moving from one stage to the next, not all learners develop at the same time. The fact that learners may be in different developmental stages would explain the observed behaviour of the learners during peer collaboration. Although teachers observe the conflict it appears that they do not intervene. Instead of using such an opportunity to create cognitive conflict and consequently learning, teachers facilitate at a superficial level. Furthermore, learners may have great difficulty in seeing their peers’ perspectives as at a foundation and intermediate phase they struggle to see and create abstract relationships (Landsberg, Kuger & Nel, 2005).

Learners who are unable to think abstractly will struggle to participate in collaborative tasks. Landsberg, Kruger and Nel (2005) indicate that higher order thinking skills are required during peer collaboration. Their reason for this is that one learner needs to challenge the ideas presented, another learner needs to ask in- depth questions, which may lead to a better understanding. Landsberg, Kruger and Nel (2005) further state that such thinking skills would not be expected from learners in the foundation and intermediate phase but from learners in the senior phase. Therefore, one has to question why is there such a strong push from education authorities encouraging peer collaboration in the foundation and intermediate phase. Furthermore, even though

teachers are aware of the difficulties in implementing peer collaboration they continue to use it to facilitate learning.

Acknowledging that groups are a part of everyday life, the importance of encouraging peer collaboration is understood. However, teachers are conflicted about how effective peer collaboration is. Donald et al (2002) provide a different perspective on peer collaboration when they stated that peer collaboration "captures the notion of mediation at the peer level, the stimulation of cognitive conflict between students of similar but not identical levels of understanding" (p.114). Based on Donald et al's (2002) definition, although teachers' intentions of creating mixed ability groups are commendable, such groups do not encourage learning. In a group of mixed ability learners, although they differ in opinion there are no similarities upon which common understandings is based. The lack of common understanding often results in learners disengaging. Some learners choose to disengage because they want to retain their individuality however, some learners simply do not participate.

The lack of participation brings to light the phenomenon of social loafing. Social loafing is perceived as a way in which 'lazy' learners escape taking responsibility for their learning. Further suggesting that not all learners are able to effectively make use of collaborative groups. Thus, the purpose of facilitating successful learning through collaborative groups becomes questionable.

However, there are two additional explanations that can be given for the observed behaviour of social loafing: motivation and reinforcement. Motivation plays an important part in the learning process as one teacher correctly noted that if learners enjoy the learning experience they are more willing to engage in similar tasks. Although motivation may increase learner participation, the reinforcement of the learner's behaviour is equally important. Teachers' previous responses to the 'lazy' or 'weak' learner may have reinforced a particular behaviour. Skinner believes that reinforcement has a significant effect on learning. From Skinner's point of view, if a learner is positively reinforced within the context of learning he/ she will be more

likely to repeat the behaviour. On the contrary, if the learner has experienced a lack of teachers' reinforcement the student is less likely to engage in any task that resembles the initial attempt. Reinforcement is therefore vital in facilitating the learning process, as it allows the unfamiliar concept to become familiar, aiding the learner to a deeper and more complex level of understanding.

"To generate co-operative group work successfully, the educator needs to understand the complexities, processes and dynamics of groups" (Eloff & Ebersöhn, 2004, p. 192). Eloff and Ebersöhn (2004), indicate that it is not an easy task to implement collaborative groups, as it is "not a simplistic, superficial encounter, it requires in depth study and practice, and continual personal growth and engagement with learners in the classroom" (p. 193). Therefore, the teachers' experiences that peer collaboration, although useful, is difficult to implement are congruent with Eloff and Ebersöhn's (2004) statement. This indicates that what policy makers had in mind resembles little of what goes on in the classroom. The implementation is not the only obstacle faced but also the assessing of individual learning poses a problem. Many teachers find it difficult to assess accurately if individual learning has occurred during collaborative learning. If teachers are conflicted about their ability to assess for successful learning, how are they able to ensure quality education for all? Donald et al (2002) indicate meaningful teaching / learning does not take place without some form of assessment. The importance of assessment is that it enables teachers to know if learners can move from their current level of understanding to a more complex understanding. The majority of the sample indicate that they find rubrics useful in assessing group learning however, they revert to 'old' assessment tools to ensure that individual learning has taken place. Despite the level of contention in using 'older' methods of assessment, particularly individual assessment, Eloff and Ebersöhn (2004) suggest that if used in combination with other modes of assessment it "obtains a holistic view of the child in terms of competencies, assets and areas of difficulty" (p. 320). Individual assessment also allows the teacher to identify areas of understanding that need further mediation.

In conclusion, learning cannot be seen as a one-way process but as a continuous and dynamic interaction between the teacher and learner. Furthermore, learning should not only be about life skills education but also about challenging the learners to think differently. The cognitive challenges therefore confront the learner with something, which is unfamiliar but also allows the appropriate cognitive conflicts to occur (Donald et al, 2002). Resolving such challenges, motivates the learner as well as builds self-confidence, which ultimately drives the learner towards more learning.

Conclusion

"One cannot assume that all learners will learn from strategies such as small-group discussions, and that one cannot assume that all learners will learn the same things in a fixed period of time" (Spady, 1994 in Killen undated, p.4). Therefore, enabling strategies such as peer collaboration need to be carefully considered as there is no guarantee that all learners have learnt. Alongside this consideration, is that of the practicality of implementing peer collaboration.

Results from the present research showed that teachers have an accurate understanding of a learner-centred approach to teaching. However, teachers seem to 'mouth' what policy says about OBE but display no deeper understanding of the actuality of achieving its principles. The lack of understanding is evident in their interpretations on how to effectively use peer collaboration as a tool for learning. The uncertainty teachers experience in understanding, implementing and assessing learning using peer collaboration indicates that teachers received little support form the Department of Education leaving teachers feeling despondent about their ability to provide education for all.

While Piaget's theory of development may be invoked to justify group work in the classroom, teachers' understanding of the theory would need to be modified to include the necessity of cognitive conflict in group work. He proposes that learners need to challenge each other's ideas. As a result, the learner/ learners, current level of

understanding is examined and new schemes are created or existing schemes are added to. However, the skills needed to think in a decentred way, develop from approximately from age 11 onwards (Piaget, 1964) which is the intermediate phase of the South African education system. Thus, it is the contention of this report that the use of collaborative groups in earlier phases mainly promotes the development of social skills and not higher order thinking skills.

Secondly, Vygotsky's notion of mediation also seems to be misunderstood. Mediation according to Vygotsky requires both the teacher and the learner to engage in an activity to create learning. The role of a teacher's active engagement is to move the learner from a current level of understanding to a level of understanding that is just beyond that which he already knows. However, it appears that, a significant number of teachers view their role in mediation as ensuring that all learners are participating and doing what they should be doing.

The fact that in any group, dynamics play a significant role in attaining the goal is often forgotten when implementing peer collaboration in the context of the classroom. Based on the data provided in this report teachers' observations indicate that learners in foundation and intermediate phases struggle to work in groups. Teachers propose two reasons for this, firstly children are still egocentric and oppose their peer's points of view, and secondly they have not yet acquired the skills needed for group work. Lastly, the report showed that when using peer collaboration teachers should be aware of the phenomenon of social loafing and how it affects the overall success of the group.

This study only included twenty-five teachers from five different schools in Gauteng therefore making it difficult to generalise the perceptions of this sample to teachers in general. In addition, the questionnaire was not standardized on a large sample of teachers. Despite the limitations, the study's findings have mirrored certain aspects of other research (e.g. Jansen and Christie) concerning teachers' perceptions of OBE and peer collaboration. Serious consideration should be given to the concerns raised by the

teachers in this report as they deal with the practicality of implementing the idealistic views of policy makers.

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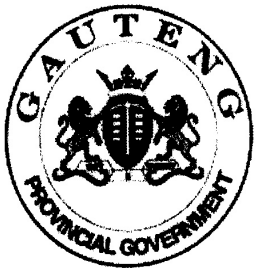
Appendix A



UMnyango WezeMfundo
Department of Education

Lefapha la Thuto
Departement van Onderwys

Enquiries Shadrack Phele
(011)355-0285

17 August 2007

Mrs Byers Nicole
184 Wyoming Avenue
Berario
2195

Dear Mrs Byers Nicole

APPROVAL TO CONDUCT ACADEMIC RESEARCH (PROVISIONAL)

The Gauteng Department of Education hereby grants permission to conduct research in its institutions as per application.

Topic of research: "Learning with/from others: Teachers' perceptions of peer collaboration and group work in the OBE classroom".

Degree: Med. (Psychology).

Name of university: University of the Witwatersrand.

Upon completion of the research project the researcher is obliged to furnish the Department with copy of the research report (electronic or hard copy).

Wish you success in your academic pursuit.

Yours in Tirisano,

2007/11/09

TOM WASPE
CHIEF INFORMATION OFFICER
Gauteng Department of Education

Office of the DDG:IS & KM (CIO)
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Appendix B

Information pertaining to the implementation of research and procedure of questionnaire completion.

School of Human and Community Development
Private Bag 3, Wits 2050, Johannesburg, South Africa
Tel: (011) 717-4500 Fax: (011) 717-4559
Email: 018lucy@muse.wits.ac.za

My name is **Nicole Byers**, and I am conducting research for the purposes of obtaining a Masters degree in Educational Psychology at the University of the Witwatersrand. My area of focus is that of the perceptions of teachers pertaining to the efficacy of peer collaboration/ group work in the OBE classroom. The investigation on the efficacy of peer collaboration is based on the fact that the South African education has had a "face lift" and as a result has endure much change. Part of the research aims is to explore how teachers perceive the new curriculum's efficacy in obtaining learner success. In addition to this, the method of implementation as well as the understanding surrounding OBE will be explored. We would like to invite you to participate in this study.

Participation in this research will entail completing a questionnaire. The questionnaire consists of four pages and will take about 20 minutes to complete. Participation is voluntary, and no person will be advantaged or disadvantaged in any way for choosing to participate or not participate in the study. All of your responses will be kept confidential, and no information that could identify you would be included in the research report. The questionnaires will not be read by any person, other than myself. You may refuse to answer any questions you would prefer not to, and you may choose to withdraw from the study at any point.

If you choose to participate in the study, please fill in your details on the form below and staple it to your answered questionnaire. Alternatively, I can be contacted telephonically at **082 447 7952** or via e-mail at **byers@discoverymail.co.za**

Your participation in this study would be greatly appreciated. This research will contribute both to a larger body of knowledge on perceptions of Outcomes Based Education, as well as the degree to which leaner success is achieved through peer collaboration/ group work. This can help to inform the development of policies and procedures.

Kind Regards

Nicole Byers

Appendix C

Headmaster/ Headmistress Consent Form

Consent form to conduct research in the school

I _____ the Headmaster/ mistress of_____ _consent to the staff of _____ completing the questionnaire designed by ***Nicole Byers*** for his/**her** study on ***Teacher's perceptions on the efficacy of peer collaboration/ group work in the OBE classroom***. I understand that:

- Participation is voluntary.
- That as a school we may withdraw from the study at any time
- No information that may identify the school will be included in the research report, and my responses will remain confidential.

Signed _____
Date: _____

Appendix D Participant Consent Forms

Consent form for interview

I _____ consent to completing the questionnaire designed by ***Nicole Byers*** for his/**her** study on ***Teacher's perceptions on the efficacy of peer collaboration/ group work in the OBE classroom***. I understand that:

- Participation is voluntary.
- That I may refuse to answer any questions I would prefer not to.
- I may withdraw from the study at any time.
- No information that may identify me will be included in the research report, and my responses will remain confidential.

Signed _____
Date: _____

Appendix E

Research questionnaire:
Learning with/ from others: Teacher's perceptions of peer collaboration and group work in the OBE classroom.

Biographical information

Gender	Male	Female			
Age	20-30	30- 40	40- 50	50-55	55 +

Section 1: Individual information

What is your highest qualification level?

Diploma	Degree	Honours	Masters	Doctorate

How many years have you been teaching?

2 years of less	2- 5 years	6- 10 years	11- 20 years	21 years +

What is your role within the school?

Teacher	Grade head	Head of Department	Deputy Principal	Headmaster/ Headmistress

Section 2:

2.1 OBE related questions

2.1.1. What is your understanding of Outcomes Based Education (OBE)?

2.1.2. Have you read any of the OBE documents? If yes, which ones?

2.1.3. How useful did you find the OBE documents?

2.1.4. What do you perceive the difference to be between the previous approaches to teaching (teacher centred) to OBE's approach (learner centred)?

2.1.5. What are your views on OBE?

2. 2 OBE implementation in particular peer collaboration/ collaborative learning

OBE places a large amount of emphasis on participatory, learner-centred and activity-based education. Therefore, peer collaboration and group work are seen as fundamental components of OBE. In light of this statement, please answer the following questions.

2.2.1. In terms of the subject that you teach, do you think peer collaboration can be implemented?

2.2.2. What activities do you (as an educator) engage with during peer collaboration?

2.2.3. How do you monitor the process of collaborative learning?

2.2.4. During peer collaboration/ group work, what group dynamics are you aware of?

2.2.5. How do the collaborative groups form?

2.2.6. What is your perception on the **efficacy (usefulness) of learning** that takes place during peer collaboration?

2.2.7. What are your perceptions on the **efficacy (usefulness) of peer collaboration** within the OBE classroom?

2.2.8. Why would you state this?

2.2.9. How do you (the educator) assess the success of **learning** after peer collaboration?

2.2.10. As an educator, are you able to verify that **individual learning** has successfully taken place after peer collaboration?

2.2.11. As an educator, is there room for alternative means of assessment? If yes, what would you recommend?

_____
_____
_____
_____
_____
_____
_____
_____

 **Thank you, your participation is greatly appreciated!**